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System Change, Learning and Public Opinion about the Economy

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This study examines attitudes about the economy under conditions of system change. We argue that citizens in new market economies are relative novices with regard to understanding the new economic environment at the beginning of the transition phase, but that they accumulate experience as time passes. We develop and test two hypotheses: (1) we expect that, over time, economic perceptions more closely track objective economic performance; (2) as a corollary, we hypothesize that, over time, economic policy priorities of citizens in a new market economy more closely track objective economic performance. Time-series data of objective economic indicators and public opinion collected in East Germany between 1991 and 1995 are analysed using regression analyses and tests of structural change in parameters. We find that East Germans' economic perceptions correspond to actual economic trends as they develop experience with the political-economic system. The implications of our findings for research on the relationship between the economy and political support in societies in transition are discussed.

Economic conditions and people's perceptions of them have been used to explain public support for political actors and institutions in virtually every industrialized democracy in the world. Considerable evidence accumulated across a number of democracies has shown that governments lose support and that citizens are less satisfied with the political system during hard economic times.¹ Taken together, this rich literature suggests a prime role for the economy as a determinant of political behaviour and, by implication, as a factor affecting the functioning of advanced democracies.²

Recent developments in Eastern Europe³ and Latin America have provided

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¹ See, for example, Peter Nannestad and Martin Paldam, 'The VP-Function: A Survey of the Literature on Vote and Popularity Functions After 25 Years', *Public Choice*, 79 (1994), 213–45; Helmut Norpoth, 'The Economy', in Lawrence LeDuc, Richard G. Niemi and Pippa Norris, eds, *Comparing Democracies: Elections and Voting in Global Perspective* (Thousand Oaks, Calif.: Sage, 1996).

² Christopher J. Anderson and Christopher Wlezien, 'The Economics of Politics in Comparative Perspective Revisited', *Political Behavior*, 19 (1997), 1–6.

³ When referring to 'Eastern Europe' we mean to include the former Communist bloc countries of central and eastern Europe, including the successor states of the Soviet Union.

social scientists with opportunities to study the nexus of economic performance and political behaviour in systems undergoing momentous change. Scholars have devoted considerable effort to examining the relationship between economic performance and measures of political support such as government approval and support for economic reforms, democratic norms and the political system in a variety of new democratic systems. Thus far, this emerging literature suggests that economic performance and mass attitudes are linked in these systems in transition as well, although a consensus over precisely how and why they are related does not yet exist.⁴

Linking economic conditions to political behaviour in both established and transitioning systems assumes a congruence between citizens' economic perceptions and the state of the macro-economy. Specifically, researchers have used citizens' economic perceptions to predict behaviour because measures of the subjective economy presumably reflect the actual state of the objective economy. Conversely, scholars have modelled political behaviour as a function of objective economic indicators based on the assumption that the state of the economy is translated into behaviour via citizens' perceptions.

Whether the decision to use objective indicators as proxies for subjective ones is reasonable is an empirical question, and one that has been raised in the context of mature democracies.⁵ The practice of substituting one measure for the other faces an even stiffer challenge in systems undergoing radical transformation. Unlike members of stable systems who have had a lifetime of experience with their economic and political environments, citizens in rapidly changing systems must collect, interpret and assimilate unfamiliar data about the new situation in which they find themselves. Based on an extensive body of research on learning,⁶ we argue that experience with a system is critical to the linkage between the subjective and objective economy. Specifically, we contend that

⁴ See, e.g., Russell J. Dalton, 'Communists and Democrats: Democratic Attitudes in the Two Germanies', *British Journal of Political Science*, 24 (1994), 469–93; Raymond Duch, 'Tolerating Economic Reform: Popular Support for Transition to a Free Market in the Former Soviet Union', *American Political Science Review*, 87 (1993), 590–608; Geoffrey Evans and Stephen Whitefield, 'The Politics and Economics of Democratic Commitment: Support for Democracy in Transition Societies', *British Journal of Political Science*, 25 (1995), 485–514; William Mishler and Richard Rose, 'Trajectories of Fear and Hope: Support for Democracy in Post-Communist Europe', *Comparative Political Studies*, 28 (1996), 553–81; Alexander Pacek, 'Macroeconomic Conditions and Electoral Politics in East Central Europe', *American Journal of Political Science*, 38 (1994), 723–44.

⁵ Henry W. Chapell and William Keech, 'Explaining Aggregate Explanations of Economic Performance', in Helmut Norpoth, Michael S. Lewis-Beck and Jean-Dominique Lafay, eds, *Economics and Politics: The Calculus of Support* (Ann Arbor: University of Michigan Press, 1991); H. Brandon Haller and Helmut Norpoth, 'Let the Good Times Roll: The Economic Expectations of US Voters', *American Journal of Political Science*, 38 (1994), 625–50.

⁶ Susan T. Fiske, Donald R. Kinder and W. Michael Larter, 'The Novice and the Expert: Knowledge-Based Strategies in Political Cognition', *Journal of Experimental Social Psychology*, 19 (1983), 381–400; Susan T. Fiske and Donald R. Kinder, 'Involvement, Expertise, and Schema Use: Evidence from Political Cognition', in N. Cantor and J. Kihlstrom, eds, *Personality, Cognition, and Social Interaction* (Hillsdale, NJ: Erlbaum, 1981).

the relationship of objective and subjective economy in systems undergoing radical change approximates that found in established systems only after some time has passed.

To test this argument, we investigate economic and political attitudes in East Germany for a period of roughly four years after the fall of the Communist regime. Using monthly economic and public opinion data, we examine the fit between objective economic reality and East Germans' economic perceptions. By combining insights from research on learning and economic voting, this study links and extends two research traditions that have been distinct. First, we advance our understanding of public opinion about the economy by examining its particular characteristics in political economies undergoing momentous change. Secondly, we contribute to our understanding of attitude change by examining the psychological mechanisms underlying citizen attitudes about the economy. By developing a dynamic representation of the relationship between citizens' attitudes (economic perceptions) and the object they think about (the state of the economy), we can gain additional insights into what and how they think about the economy.

The next section considers the link between economic conditions and public opinion in advanced political economies and in systems undergoing radical change. The article then develops hypotheses about attitude change that subsequently are tested using data collected in East Germany from 1991 to 1995. The final part of the article discusses the results and spells out avenues for future research.

ECONOMIC CONDITIONS AND ECONOMIC PERCEPTIONS IN STABLE AND CHANGING SYSTEMS

Scholars who study the relation between the economy and political behaviour have two kinds of measures of the macro-economy available to them: subjective and objective ones. Subjective indicators include citizens' beliefs about the state of the economy, their evaluations of how the economy has changed since the last election, whether they think the economy is an important problem, and so on. Relying on citizens' attitudes about the economy means making implicit assumptions about the relations between economic perceptions, objective economic conditions, and political behaviour; primarily, that economic information is perceived and interpreted by the individual with some reasonable degree of accuracy, and that these perceptions motivate political behaviour.⁷

⁷ For the debate about whether national (sociotropic) or personal (egocentric or pocketbook economic) perceptions matter more for political behaviour, see Pamela Conover, Stanley Feldman and Kathleen Knight, 'The Personal Underpinnings of Economic Forecasts', *American Journal of Political Science*, 31 (1987), 559–83; Donald Kinder and D. Roderick Kiewiet, 'Sociotropic Politics: The American Case', *British Journal of Political Science*, 11 (1981), 129–61. For the purposes of this article, we focus on sociotropic perceptions. Economic perceptions may be prospective or retrospective. *Retrospective* survey items ask respondents whether the economy has developed well or badly in the past (however defined), whereas *prospective* survey items gauge citizens' expectations

Sometimes, subjective indicators of the economy are not available either in the countries of interest or over long periods of time. In these situations, researchers have relied on objective indicators such as unemployment and inflation rates to predict political behaviour using objective economic conditions as proxies for individuals' perceptions of them. This approach also assumes a reasonably close association between the two measures. That is, it assumes that citizens have information about the economy available to them, and that they interpret it reliably and consistently.

There is a spirited debate about exactly how citizens reason about the economy,⁸ and empirical research on aggregate public opinion dynamics in mature democracies has sought to validate the assumption of a congruence of objective and subjective economy.⁹ While some have noted, for example, that aggregate public opinion moves in response to real world conditions, particularly unemployment and inflation,¹⁰ others have found the link to be more tenuous.¹¹ Finding that objective and subjective economy tend to track each other in the United States or Britain may provide a reasonable starting place for extrapolating to other mature democracies. Whether the same is true for public opinion in systems undergoing radical change, however, is yet to be established, and making the assumption is fraught with peril.

Although researchers have examined the relationship between the economy and political support variables in a number of East European countries since

(*F'note continued*)

regarding future developments of economic performance (see Harold D. Clarke and Marianne Stewart, 'Prospections, Retrospections, and Rationality: The "Bankers" Model of Presidential Approval Reconsidered', *American Journal of Political Science*, 38 (1994), 1104–23; Helmut Norpoth, 'Presidents and the Prospective Voter', *Journal of Politics*, 58 (1996), 776–92). We do not address this debate here because we examine the correspondence of economic perceptions of the *current* state of the economy and *current* economic conditions.

⁸ See, e.g., the exchange by Helmut Norpoth, 'Presidents and the Prospective Voter', and Michael B. MacKuen, Robert S. Erikson and James A. Stimson, 'Comment', *Journal of Politics*, 58 (1996), 793–801.

⁹ Douglas Hibbs, *The Political Economy of Industrial Democracies* (Cambridge, Mass.: Harvard University Press, 1987); Haller and Norpoth, 'Let the Good Times Roll'; Michael B. MacKuen, *More Than News* (Beverly Hills, Calif.: Sage, 1981).

¹⁰ Benjamin Page and Robert Shapiro, *The Rational Public: Fifty Years of Trends in Americans' Policy Preferences* (Chicago: University of Chicago Press, 1992), pp. 121–2.

¹¹ Examining individual-level data, some scholars have found that the degrees of fit between objective and subjective variables are less reliable than is commonly assumed, or that some variables are correlated while others are not. These results suggest that individuals, subgroups, or populations may err systematically about economics as well as politics. See, e.g., Harold D. Clarke, Euel Elliott, William Mishler, Marianne Stewart, Paul Whiteley and Gary Zuk, *Controversies in Political Economy: Canada, Great Britain, the United States* (Boulder, Colo.: Westview Press, 1992), especially chap. 3; George Krause, 'Voters, Information Heterogeneity, and the Dynamics of Aggregate Economic Expectations', *American Journal of Political Science*, 41 (1997), 1170–200, especially p. 1189; David Sanders, 'Why the Conservative Party Won – Again', in Anthony King, ed., *Britain at the Polls, 1992* (London: Chatham House, 1993).

the revolutions of 1989–90,¹² few scholars have investigated the validity of the assumptions underlying the use of subjective and objective indicators in this context. Rather, they have extrapolated from the mature democracies, assuming that economic perceptions by and large reflect the state of the economy in transition societies. This focus has meant that there has been considerable debate about whether the state of the economy actually affects political behaviour and about what kinds of support (support for democracy, political and economic reforms, incumbents, the regime, etc.) are affected by economic conditions.¹³ It also has meant, however, that the causes or consequences of attitude change about the economy in societies in transition are largely unknown, and that few scholars have sought to provide an explicit psychological foundation of attitudinal development in these contexts.

SYSTEM CHANGE AND LEARNING

When researchers use perceptual variables in models of political support, when they substitute objective for subjective measures in economic voting models, or when they investigate the link between objective economic conditions and the public's economic perceptions, they make assumptions about how people process information. In an ideal world, well-informed citizens would have full access to all objective economic information, they would perceive it accurately, they would encode this information into memory without distortion, and they would later retrieve it from memory free of further distortion and error. Under these (ideal) conditions, perceptions of the economy would reflect economic reality perfectly, rendering subjective and objective economic indicators substitutable and thus equally useful for explaining political behaviour.

However, because representations of objects and people are constructed, they are less-than-perfect reproductions of original stimuli.¹⁴ Most scholars of public opinion recognize these limitations and therefore do not assume strict congruence of objective and subjective economy across all subgroups of a population. Rather, they allow for the possibility that a number of individuals in any population may well have inaccurate perceptions because they filter information through a lens that may be 'distorted' by individual-level differences such as levels of political sophistication and education, or by

¹² Arthur H. Miller, Vicki L. Hesli and William M. Reisinger, 'Conceptions of Democracy Among Mass and Elite in Post-Soviet Societies', *British Journal of Political Science*, 27 (1997), 157–90.

¹³ Duch, 'Tolerating Economic Reform'; Evans and Whitefield, 'The Politics and Economics of Democratic Commitment'; Pacek, 'Macroeconomic Conditions and Electoral Politics in East Central Europe'.

¹⁴ Floyd H. Allport, *Theories of Perception and the Concept of Structure* (New York: Wiley, 1955); Egon Brunswik, *Wahrnehmung und Gegenstandswelt* (Leipzig and Vienna: Deuticke, 1934); Fritz Heider, *The Psychology of Interpersonal Relations* (New York: Wiley, 1958).

attitudes, biases and external factors such as the media and political institutions.¹⁵

At the level of individuals, there is evidence to suggest that experience, expertise, socio-economic status and levels of information all contribute to the accuracy of economic perceptions.¹⁶ Moreover, researchers have found that people's economic perceptions can be systematically biased on the basis of political affiliation and their exposure to media and elite influences.¹⁷ Others still have pointed to the critical role played by political events, such as wars and crises, in people's economic perceptions.¹⁸

However, a good number of the biased and inaccurate perceptions that may exist can be expected to cancel each other out in the aggregate.¹⁹ As a result, researchers have been able to demonstrate significant and positive correlations between objective economy and economic perceptions with the help of aggregate-level data.²⁰ Although aggregate assessments of very specific economic indicators (for example, interest rates, inflation rates) occasionally have been found to be inaccurate,²¹ scholars typically have documented a consistent and reasonably close fit between economic reality and economic perceptions at the aggregate level.

Assumptions about such a consistent 'goodness of fit' between objective reality and citizens' economic perceptions may not be tenable in new market economies, however. As Ada Finifter has pointed out, 'attitudes and relationships may be unstable, and many findings may not be very robust during times of great economic and political change'.²² This may be especially true during the initial phase of transition and system transformation. Aside from

¹⁵ Thomas Holbrook and James C. Garand, 'Homo Eonomus? Economic Information and Economic Voting', *Political Research Quarterly*, 49 (1996), 351-75; Krause, 'Voters, Information Heterogeneity, and the Dynamics of Aggregate Economic Expectations'.

¹⁶ See, e.g., Robert Luskin, 'Measuring Political Sophistication', *American Journal of Political Science*, 31 (1987), 856-99; Michael B. MacKuen and Calvin Mouw, 'Social Class and Economic Judgments' (paper presented at the Workshop on the Economy and Political Behaviour, Rice University, 1995); William R. Neuman, *The Paradox of Mass Politics: Knowledge and Opinion in the American Electorate* (Cambridge, Mass.: Harvard University Press, 1986); John Zaller, *The Nature and Origins of Mass Opinion* (New York: Cambridge University Press, 1992).

¹⁷ Christopher Wlezien, Mark Franklin and Daniel Twiggs, 'Economic Perceptions and Vote Choice: Disentangling the Endogeneity', *Political Behavior*, 19 (1997), 7-17; Christopher J. Anderson and Raymond M. Duch, 'Comparing Economic Realities and Voter Responses' (paper presented at the Annual Meeting of the American Political Science Association, San Francisco, 1996); MacKuen and Mouw, 'Social Class and Economic Judgments'.

¹⁸ Clarke *et al.*, *Controversies in Political Economy*.

¹⁹ Gerald Kramer, 'The Ecological Fallacy Revisited: Aggregate- Versus Individual-Level Findings on Economics and Elections, and Sociotropic Voting', *American Political Science Review*, 77 (1983), 92-111.

²⁰ Clarke *et al.*, *Controversies in Political Economy*.

²¹ Haller and Norpoth, 'Let the Good Times Roll'.

²² Ada W. Finifter, 'Attitudes Toward Individual Responsibility and Political Reform in the Former Soviet Union', *American Political Science Review*, 90 (1996), 138-52.

perceptual distortions that can be expected to occur in every system, new market economies may create additional complications that interfere with perceiving the economic situation accurately. In stable systems, a sufficient number of people may become adept at interpreting economic indicators to produce significant correlations between objective economic conditions and perceptions at the aggregate level. However, citizens in new systems may have particularly *unreliable* perceptions of the national economy during the *initial* phase of system transformation, given that they are similarly inexperienced with regard to understanding the new economic environment.

We argue that citizens in new systems thus have to go through a period of learning. Based on an extensive body of research suggesting that people acquire complex knowledge through experience,²³ we contend that experience should change citizens' perceptions over time: 'People draw heavily on accumulated experience to aid their understanding. The more experience they have, the more easily and thoroughly they can assimilate new information'.²⁴

We speculate that this experience comes from a variety of sources, but mostly through personal exposure to the economic system (as consumer, employee or business owner, for example) or through the accumulation of information via the media and personal relationships (for example, by observing the employment situation of one's friends and family members). Moreover, it should translate personal experience into collective grievances that become politically charged. If economic perceptions evolve over time and become more reflective of actual economic trends as a function of experience, radical change in the form of exposing citizens to a completely new system may distort perceptions of objective economic reality among citizens in transition economies. Put differently, when system longevity – a key ingredient in the development of accurate and reliable perceptions – is missing, economic perceptions are likely to be systematically distorted until citizens become expert at dealing with the new situation.²⁵

²³ See, e.g., William G. Chase and Herbert A. Simon, 'The Mind's Eye in Chess', in William G. Chase, ed., *Visual Information Processing* (Orlando, Fla.: Academic Press, 1973); D. A. Hinsley, J. R. Hayes and Herbert A. Simon, 'From Words to Equations: Meaning and Representation in Algebra Word Problems', in M. A. Just and P. S. Carpenter, eds, *Cognitive Processes in Comprehension* (Hillsdale, NJ: Erlbaum, 1977); J. H. Larkin, J. McDermott, D. P. Simon and H. A. Simon, 'Models of Competence in Solving Physics Problems', *Science*, 208 (1980), 1335–42; James Shanteau and Thomas R. Stewart, 'Why Study Expert Decision Making? Some Historical Perspectives and Comments', *Organizational Behavior and Human Decision Processes*, 53 (1992), 95–106.

²⁴ Fiske, Kinder and Larter, 'The Novice and the Expert'; Fiske and Kinder, 'Involvement, Expertise, and Schema Use'. See also Philip E. Converse, 'Public Opinion and Voting Behaviour', in Fred I. Greenstein and Nelson W. Polsby, eds, *Handbook of Political Science*, Vol. 4 (Reading, Mass.: Addison-Wesley, 1975), p. 97.

²⁵ Two scenarios are conceivable: early on, the transition process may impede people's ability to develop expertise; or people may react rationally to the changing context after some time by using new information to update their expectations about regime performance – that is, they may become

To be sure, we would expect idiosyncrasies in citizens' learning curves at the individual level, depending on their cognitive sophistication, interest and personal experiences with a capitalist economy. That is, we would not expect everyone in a transition society to be equally adept at dealing with and learning about the new environment. Under these conditions, we would expect some citizens to make systematic mistakes, some to answer randomly, and some to be accurate. In the aggregate, this mix of judgements should translate into the absence of a systematic relationship between economic conditions and perceptions during the initial period of transition.²⁶

Based on the aggregate data available for empirical tests, we expect the relationship to become strongly positive after some time has passed and to be significantly different from the relationship that exists during the early phase of transition.²⁷ However, if citizens in new systems perceive objective economic conditions reliably from the beginning of the transition – that is, if a learning process does *not* take place – there should be roughly similar correlations between objective and subjective indicators at different points during the transition process (null hypothesis). Thus, in the absence of learning one would *not* expect to see a zero positive correlation early on and a strongly positive one later.

HYPOTHESES

We expect to find little congruence of objective economic conditions and public opinion about the economy at the beginning of the transition phase. However, there should be a greater correspondence between economic conditions and mass attitudes about the economy after some time has passed.

HYPOTHESIS 1: The relationship between citizens' assessments of current economic conditions and actual economic performance should differ systematically between the initial phase of the transition and after time has passed. While the two should be unrelated in the beginning, the relationship should be positive and significant at the end of the transition period.

If public opinion about the economy evolves as a function of accumulated experience with the new system, we should be able to detect this phenomenon

(F'note continued)

adept at dealing with the certainty of uncertainty. See, e.g., Richard Gunther, Giacomo Sani and Goldie Shabad, *Spain after Franco: The Making of a Competitive Party System* (Berkeley: University of California Press, 1988); Scott Mainwaring, 'Transitions to Democracy and Democratic Consolidation: Theoretical and Comparative Issues', in Scott Mainwaring, Guillermo O'Donnell and J. Samuel Valenzuela, eds, *Issues in Democratic Consolidation: The New South American Democracies in Comparative Perspective* (Notre Dame, Ind.: University of Notre Dame Press, 1992). At the aggregate level, these scenarios both produce similar empirical results.

²⁶ Note, however, that negative or weakly positive relationships are theoretically possible as well, depending on the distribution of such responses in the population as a whole – that is, depending on the individual-level differences in the learning curves – though we find them less probable.

²⁷ It is worth noting that we do not seek to make predictions about how long it takes for economic perceptions and objective economic reality to match. Along similar lines, we do not suggest a specific time period during which most of the learning occurs. At this point, these appear predominantly to be empirical, not theoretical, questions.

in related areas. A further test for the congruence of objective trends in the economy and public opinion considers the extent to which opinions about issues facing the nation (policy preferences) reflect trends in the macroeconomy.

HYPOTHESIS 2: The relationship between citizens' economic policy priorities and actual economic performance should differ systematically between the initial phase of the transition and after time has passed. While policy priorities and economic performance should be unrelated early on, they should come to mirror each other more closely over time.

Related research on political and economic attitudes conducted in the new market economies of Eastern Europe suggests that the idea of a learning process has considerable face validity. Although they do not seek to build an explicit psychological model of attitude change, Geoffrey Evans and Stephen Whitefield portray political behaviour across the new democracies of Eastern Europe as being in a state of flux during the initial phase of transformation.²⁸ Specifically, they contend that citizens undergo distinct learning processes. As a result, 'the experience of market and democratic reforms is part of an ongoing reorientation of political culture.'²⁹ Based on Adam Przeworski's notion of an iterative relationship between public opinion and government policy,³⁰ Whitefield and Evans initially observe an 'environment of ignorance about the consequences of transition' followed by an 'accumulation of experience of transition'.³¹

Notions of experiential learning also are echoed in research on attitudes among the Russian mass public, given the 'inadequate knowledge about market economics' among citizens.³² Along similar lines, Ada Finifter finds support for a learning process of political attitudes in an analysis of the effects of changing levels of education on support for political reform in the (former) Soviet Union,³³ and Richard Rose has argued that both mass publics and elites are likely to go through a period of trial and error, after which they adjust to a more stable *modus operandi*.³⁴

²⁸ Geoffrey Evans and Stephen Whitefield, 'Identifying the Bases of Party Competition in Eastern Europe', *British Journal of Political Science*, 23 (1993), 521-48; Stephen Whitefield and Geoffrey Evans, 'The Russian Election of 1993: Public Opinion and the Transition Experience', *Post-Soviet Affairs*, 10 (1994), 38-60.

²⁹ Whitefield and Evans, 'The Russian Election of 1993', p. 39.

³⁰ Adam Przeworski, *Democracy and the Market* (New York: Cambridge University Press, 1991).

³¹ Whitefield and Evans, 'The Russian Election of 1993', p. 39.

³² Gennady M. Denisovsky, Polina M. Kozyreva and Mikhail S. Matskovsky, 'Twelve Percent of Hope: Economic Consciousness and a Market Economy', in Arthur H. Miller, William M. Reisinger and Vicki L. Hesli, eds, *Public Opinion and Regime Change: The New Politics of Post-Soviet Societies* (Boulder, Colo.: Westview Press, 1993), p. 224.

³³ Finifter, 'Attitudes Toward Individual Responsibility and Political Reform in the Former Soviet Union'.

³⁴ Richard Rose, 'Escaping from Absolute Dissatisfaction: A Trial-and-Error Model for Change in Eastern Europe', *Journal of Theoretical Politics*, 4 (1992), 371-93. James Gibson's research on individual-level attitudes towards democracy and the market economy echoes this theme and tests

A CASE STUDY OF EAST GERMANY

We investigate the validity of the notion of a learning process with the help of data collected in the former German Democratic Republic (East Germany). East Germany is an appropriate test case for the study of perceptions about the economy in an environment of significant political and economic change. East Germans lived under an authoritarian regime with no semblance of a market economy until the fall of the Berlin Wall in 1989, and East Germany frequently was described as the 'model' communist country among the states of central and eastern Europe.³⁵ After 1989, however, it quickly moved to establish a democratic state and, within a year, merged with West Germany under the Federal Republic's framework of a liberal democracy and a market economy.

Some may argue that the East German case is atypical for the group of transition economics of Eastern Europe. East Germans did not get their first look at Western economics and politics when the Berlin Wall fell as many East Germans had watched West German television over the years. However, even if we assume that East Germans differed from other Central and East Europeans because they may have been better prepared for what was to come under the West German system, the validity of the learning model is not compromised. In fact, if we find evidence for its validity at all, such support would be even *stronger* because the 'special' East German situation should have *reduced* some of the need for learning. What is crucially important is not so much what form the political and economic organization of the former German Democratic Republic (GDR) took after 1990, but that East Germans – like citizens in all the other transition societies – had a need for learning.

DATA AND MEASURES

In addition to being an appropriate case for theoretical reasons, East Germany has the important advantage of providing social scientists with a reliable base of economic and public opinion data that stretches over a considerable period of time. Soon after the fall of the Berlin Wall, West German polling institutes established regular surveys of the East German population, and the Deutsche

(F'note continued)

it explicitly (Gibson, 'Political and Economic Markets'). On the basis of panel surveys conducted in Russia and Ukraine in 1990 and 1992, Gibson (p. 981) finds that while political attitudes are fairly stable over the two years, 'economic attitudes changed markedly.' Noting the differences in attitudes towards markets between Russia and the Ukraine, he suggests that 'at least some of this change was due to the experience Russians accumulated with a market economy'. Thus lending support to our argument that attitudes undergo significant change during periods of transition, he goes on to say that the findings indicate 'that the transformation process should not be treated as a single period. What was true of attitudes in 1990 was not true in 1992' (Gibson, 'Political and Economic Markets', p. 982).

³⁵ Bradley C. Scharf, *Politics and Change in East Germany: An Evaluation of Socialist Democracy* (Boulder, Colo.: Westview Press, 1984).

Bundesbank (Germany's central bank) began to systematically measure East Germany's economic performance. This means that we were able to track both East Germany's objective economic conditions and the population's perceptions of the country's economic conditions at regular intervals over time, as required by our research design.

To test our hypotheses, we relied on economic and public opinion data collected at monthly intervals between October 1991 and December 1995 in the territory of the former German Democratic Republic.³⁶ The objective economic data were taken from the Monthly Reports of the Deutsche Bundesbank, whereas the public opinion data are based on surveys conducted by the Forschungsgruppe Wahlen. Given that the surveys involved interviews with 1,000–1,200 randomly selected respondents each month, we draw on an unusually rich dataset of interviews with about 50,000 East Germans over the four-year period.

The public opinion data measured citizens' evaluations of current economic performance and their mention of unemployment as one of the most important problems facing the country. The questions gauging assessments of current economic performance asked respondents whether the East German economy was perceived as good, bad or mixed. We employed the aggregate percentage of respondents indicating they perceived the East German economy as performing badly, given that the good and bad answer categories correlated in excess of 0.95 ($p < 0.001$).³⁷ The survey item measuring the importance of unemployment on the public's agenda allowed respondents to name what they perceived to be the two most important problems facing the country. We used the (monthly) percentage of respondents who mentioned unemployment as one of the two. The exact question wording can be found in Appendix A. Finally, the economic data were the monthly unemployment and inflation rates as well as the misery index (unemployment and inflation rates combined).

The East German Economy and Public Opinion

Although East Germany merged with the biggest economy in Europe, the transition experience has been fraught with enormous difficulties. Re-unification brought the introduction of the West German Deutsche Mark in the East – a monetary policy experiment of massive proportions that put hard currency in East Germans' pockets. It also put many East German enterprises out of business because it forced the much less productive East German

³⁶ The time series is constrained on both ends by data availability.

³⁷ We also conducted the analyses with a difference score (the percentage saying 'well' minus the percentage saying 'badly'). However, because the results do not differ much from those presented here, we only present the analysis of negative evaluations. See the exchange by Norpoth and MacKuen, Erikson and Stimson, *Journal of Politics*, 58 (1996), 776–805, on the potential pitfalls of such a strategy.

economy to compete on a par with the West German and other economies, while having to pay wages similar to the West.³⁸ Many uncompetitive state-owned companies were shut down and joblessness soared. To date, the East German economy has not recovered from being exposed to competition with the West, and some predict long-term economic distress in the region.

Figure 1 shows unemployment and inflation rates in East Germany, along with the percentages of East Germans saying that the economy was performing badly and that unemployment was the most important problem facing the country. The graph reveals that unemployment – a phenomenon unknown under the Communist regime – increased rapidly after re-unification, reaching between 14 and 17 per cent in early 1992 and climbing to over 18 per cent in early 1994. As 1994 and 1995 progressed, however, it started to decrease again to about 14 per cent. Along similar lines, inflation – also virtually nonexistent during Communist times – reached extremely high levels (for German standards) during the early phase of the transition (15–25 per cent), after which it declined considerably (2–4 per cent).

Given these trends, it should not come as a surprise that economic conditions and the economic reconstruction in the East played a major role in shaping the public's mood following re-unification. Almost immediately after the December 1990 election and the Kohl government's re-election, the euphoria of re-unification began to wane and the re-unification hangover set in. Within six months, East Germans organized protest rallies against rising unemployment and the economic crisis, and the government's public approval ratings plummeted.

Consistent with this development, Figure 1 also documents an increase in economic pessimism after 1991. It shows that the financial costs of re-unification as well as the frustration with the slowness of economic progress took their political toll; the East German public reacted negatively as the promise of prosperity appeared to be slipping away. However, perceptions of the East German economy started to improve markedly in late 1993, reaching their most optimistic readings by 1995.

Public opinion about policy priorities reflected this dire state of affairs during the first half of the period considered here, although the trends in economic issue priorities differed from those in general economic perceptions after that. The dynamics of unemployment as an important policy issue reveal that a large and consistent majority of East Germans (an average of 71 per cent) placed unemployment on the top of the agenda between 1991 and 1995. Instead of following the trend towards more positive readings as in the case of general perceptions of the state of the East German economy after 1993, however, there

³⁸ Karl Kaltenthaler and Christopher Anderson, 'The Domestic Politics of the Post-Unification Era: Politics, History, and Economy', in Christopher Anderson, Karl Kaltenthaler and Wolfgang Luthardt, eds, *The Domestic Politics of German Unification* (Boulder, Colo.: Lynne Rienner, 1993).

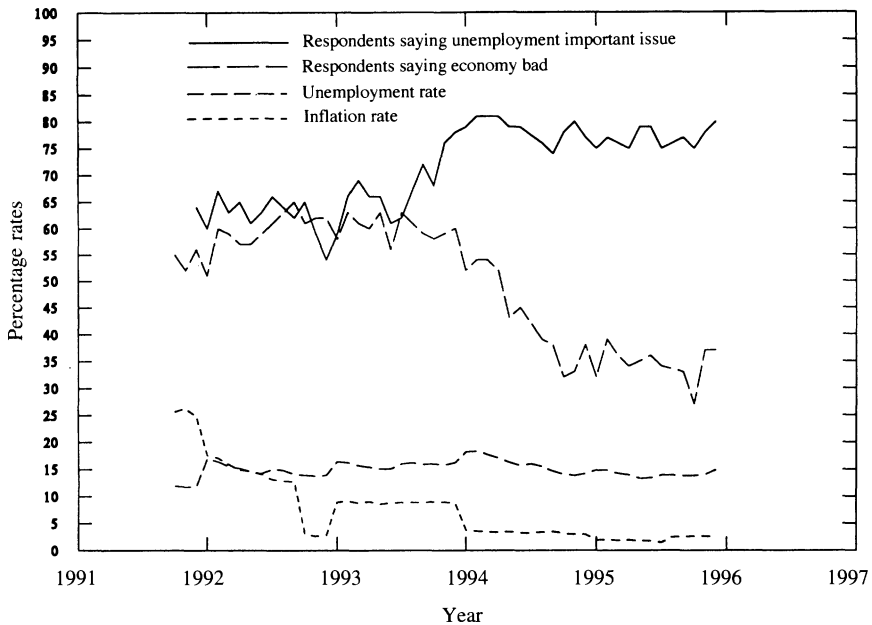


Fig. 1. Economic perceptions and economic conditions in East Germany

actually was a further increase in the proportion of East Germans naming unemployment as a top priority between mid-1993 and early 1994. Although the subsequent election year of 1994 witnessed a temporary decrease in both unemployment and the mention of unemployment as an important problem, by 1995 between 75 and 80 per cent of East Germans consistently mentioned unemployment as the most important issue, while saying at the same time that the East German economy was improving.

ANALYSIS

Following Hypothesis 1, we expected a significant change in the relationship between the proportion of East Germans with negative economic perceptions and the objective economic indicators between the initial period of transition and after some time had passed. Specifically, this relationship should be insignificant initially, but significant and positive after some time had gone by. We expected the relationship of unemployment as an important policy issue and the actual unemployment rates in East Germany to follow a similar trajectory (Hypothesis 2).

Testing these hypotheses required a measure of change in the relation between two variables over time. A number of statistical techniques are

available for detecting time-varying parameters.³⁹ However, efforts at more complex time-series modelling were handicapped by a relatively small number of time points. Thus, to ensure the robustness of the results, we followed two main strategies. First, we divided the period under investigation and calculated the statistical association between the variables during those two periods. If the coefficients were significantly different across the two different time periods, this constituted evidence that the relationship between the variables had changed over time.

For both theoretical and practical purposes, we split the time series exactly in half. An inspection of the public opinion trends presented in Figure 1 revealed a marked difference between the two periods. Specifically, the end of 1993 appeared to signal a shift in how the East German public viewed economic conditions and policy priorities. Thus, it is reasonable to assume *a priori* that much of the learning – if it took place at all – happened between the fall of the Berlin Wall and the end of the first period. On a practical level, this strategy also left a sufficient number of observations to perform estimations as well as meaningful tests of statistical significance that could be compared directly.

The second analytic strategy consisted of estimating the effects of objective conditions on perceptions over the entire time series with the help of an interaction variable that multiplied the economic indicators by a trend variable. If the interaction term was positive and significant, this would indicate that there was a tighter fit between objective economic conditions and economic opinions with each passing month.

Hypothesis 1

To test Hypothesis 1, we regressed current economic perceptions (the percentage saying 'bad') on objective economic conditions; first, for the entire time series, and then for each half of the series. To assess the significance of the results, we conducted a Chow test for structural change in the parameters over time. A significant Chow test indicates that the parameters were systematically different in the two subperiods under investigation. To give time an explicit role in our analyses and make use of the entire set of cases in one estimation, we also regressed economic perceptions on a time variable (coded 1, 2, 3, ... for each subsequent time point) and an interaction term consisting of the economic indicators and the time variable.

To guard against faulty inference because of possible autocorrelation present in the data, we relied on Generalized Least Squares (GLS) estimations (Prais–Winsten), which corrected for possible first-order autocorrelation. Tables 1 and 2 show the results of the GLS estimations; Table 1 reports the results of estimations using unemployment and inflation rates separately as the

³⁹ For a discussion, see Neil Beck, 'Time-Varying Parameter Regression Models', *American Journal of Political Science*, 28 (1984), 557–600.

independent variables, whereas Table 2 shows the results of estimations using the misery index as the economic indicator.

The results strongly supported Hypothesis 1. Inflation and unemployment rates did not have a statistically significant effect on perceptions of the East German economy when the entire period was analysed (Model 1a). However, when we split the time series, we found two very different sets of effects. During the first half of the period (Model 1b), unemployment had no effect and inflation had only a small, but negative effect, suggesting that East Germans were slightly more likely to say the economy was doing badly when inflation was actually in decline. These effects were drastically different from those obtained on the basis of regressions estimated for the second half of the period (Model 1c). During this time, unemployment and inflation both displayed highly significant positive effects, indicating that East Germans were more likely to say the economy was doing badly when joblessness and consumer prices were on the rise. The Chow test revealed that the difference in parameters between the two periods was highly significant.

Substantively, the results for Model 1c revealed that, during the 1993–95 period, a 1 percentage point rise in unemployment was associated with an almost 4 per cent increase in the number of East Germans who evaluated the economy as performing badly; similarly, a 1 per cent increase in inflation led to a 2.5 per cent increase in citizens saying the same. In contrast, unemployment did not affect economic perceptions during the 1991–93 period (Model 1b), when a 1 per cent increase in inflation actually reduced the percentage of people perceiving economic performance very slightly (by less than 0.5 per cent) during that time.

Model 2, which included the entire time period and interactions of a time variable and the economic variables, corroborated these results. Independently, inflation and unemployment had significant and negative results. In contrast, they became positive when they were used in interaction with the time variable, suggesting that the effects of the economic variables became positive and significant as time passed.⁴⁰

When we employed the misery index as the economic measure (Table 2), the results were consistent with those shown in Table 1. There was a small but negative effect of economic conditions on current economic perceptions during the first half of the series (Model 1b) and a significant and positive effect during the second half (Model 1c). This indicates that economic conditions and evaluations did not match in the beginning (they actually were inversely correlated), but that they tracked each other very closely after some time had passed. The Chow test revealed that the difference in parameters between the two periods was highly significant.

⁴⁰ To guard against the possibility that there could be a lack of a relationship early on because of a lack in movement in the dependent variable, an inspection of Figure 1 reveals that this is not the case. The same is true for results reported with regard to the mention of unemployment as an important problem facing the country.

TABLE 1 *Objective National Economic Conditions and Sociotropic Economic Evaluations in East Germany, 1991–95*

	Model 1a (1991:11–1995:12)	Model 1b (1991:11–1993:11)	Model 1c (1993:12–1995:12)	Model 2 (1991:11–1995:12)
Unemployment rate _{<i>t</i>}	– 0.533 (0.613)	– 0.183 (0.416)	3.753*** (0.559)	– 2.032* (0.850)
Inflation rate _{<i>t</i>}	0.330 (0.273)	– 0.376*** (0.091)	2.411*** (0.548)	– 0.985*** (0.258)
Time	—	—	—	– 2.294*** (0.542)
Unemployment rate _{<i>t</i>} *Time				0.091* (0.036)
Inflation rate _{<i>t</i>} *Time				0.091*** (0.017)
Constant	51.947*** (12.479)	66.627*** (6.813)	23.769*** (7.924)	101.23*** (14.106)
First order autocorrelation	– 0.280	– 0.019	– 0.027	– 0.123
D–W <i>d</i>	2.559	2.038	2.054	2.247
Rho	0.942***	– 0.103	0.157	0.509***
<i>N</i>	50	25	25	50
SEE	8.493	2.668	3.264	3.870
Sum of squares	3390.420	168.628	234.398	658.935
Adj. <i>R</i> ²	0.48	0.37	0.85	0.89
Chow test			108.716†	

Notes: Entries are unstandardized GLS regression coefficients. Standard errors in parentheses. Significance tests are two-tailed.

****p* < 0.001; ***p* < 0.01; **p* < 0.05.

†The Chow test for structural change yielded an *F*(3,44) statistic significant at the 0.01 level.

TABLE 2 *Objective National Economic Conditions and Sociotropic Economic Evaluations in East Germany, 1991–95*

	Model 1a (1991:11–1995:12)	Model 1b (1991:11–1993:11)	Model 1c (1993:12–1995:12)	Model 2 (1991:11–1995:12)
Misery index _t	0.295 (0.272)	– 3.383*** (0.087)	3.039*** (0.358)	– 0.847*** (0.231)
Time	—	—	—	– 1.985*** (0.222)
Misery index _t *Time	—	—	—	0.071*** (0.012)
Constant	41.495*** (9.213)	69.623*** (2.413)	14.806*** (6.563)	84.391*** (7.356)
First order autocorrelation	– 0.367	– 0.011	– 0.042	– 0.160
D–W <i>d</i>	2.375	2.021	2.084	2.319
Rho	0.929***	– 0.061	0.313	0.444***
<i>N</i>	50	25	25	50
SEE	9.096	2.668	3.498	3.800
Sum of squares	3971.184	170.881	269.137	664.130
Adj. <i>R</i> ²	0.39	0.39	0.83	0.89
Chow test			184.576†	

Notes: Entries are unstandardized GLS regression coefficients. Standard errors in parentheses. Significance tests are two-tailed.

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$.

†The Chow test for structural change yielded an $F(2,46)$ statistic significant at the 0.01 level.

TABLE 3 *Objective Unemployment and Mention of Unemployment as Most Important Problem in East Germany, 1992–95*

	Model 1a (1992:1–1995:12)	Model 1b (1992:1–1993:12)	Model 1c (1994:1–1995:12)	Model 2 (1992:1–1995:12)
Unemployment rate _{<i>t</i>}	0.130 (0.511)	0.235 (0.753)	0.709* (0.281)	– 0.718 (0.736)
Time	—	—	—	– 0.558 (0.532)
Unemployment rate, *Time	—	—	—	0.068* (0.033)
Constant	72.876*** (8.482)	61.305*** (11.460)	66.928*** (4.259)	69.456*** (10.760)
First order autocorrelation	– 0.076	0.017	0.073	0.054
D–W <i>d</i>	2.151	1.967	1.854	1.891
Rho	0.899***	0.522***	0.187***	0.608***
<i>N</i>	48	24	24	48
SEE	7.564	4.432	1.759	3.858
Sum of squares	2632.256	432.183	68.108	654.934
Adj. <i>R</i> ²	0.01	0.01	0.28	0.74
Chow test			97.982†	

Notes: Entries are unstandardized GLS regression coefficients. Standard errors in parentheses. Significance tests are two-tailed.

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$.

†The Chow test for structural change yielded an $F(2,44)$ statistic significant at the 0.01 level.

The results obtained with Model 2 are very similar and thus provided further support for our model. While the misery index had a negative effect by itself, it became positive and significant in interaction with the time variable.⁴¹

We also performed Ordinary Least Squares (OLS) estimations that included a lagged dependent variable on the right-hand side in order to control for the possibility of a short-term memory whereby recent economic perceptions affect current ones.⁴² Moreover, we utilized a slightly different dependent variable that measured the difference in the percentage of respondents who said the economy was doing badly and the percentage of respondents who said the economy was doing well. None of these results differed much from the GLS estimations presented here. Thus, we concluded that East Germans' assessments of current economic conditions initially were unrelated to objective economic performance, but that they became more closely associated over time.

Hypothesis 2

When we examined the relationship between unemployment rates and the mention of unemployment as the most important problem, we found that the statistical associations followed the general pattern hypothesized above. Hypothesis 2 suggested that the relationship between unemployment rates and the perception of unemployment as a problem changed over time. Specifically, the hypothesis stated that the relationship should be zero early on and become positive and highly significant. As before, we sought to detect parameter change by estimating two separate regressions based on subsets of the data and by conducting a Chow test. Moreover, we again regressed the public opinion data on actual economic conditions (in this case unemployment) and an interaction of time and the unemployment rate. The results are shown in Table 3.

The results demonstrate that there was a considerable change in the relationship between objective unemployment rates and the perception of unemployment as an important issue in East Germany. While the relationship was not significantly different from zero during the first half of the time series (Model 1b), it was significant and positive during the second half (Model 1c). Thus, during 1992–93, increases in joblessness did not affect the percentage of East Germans who said unemployment was a significant problem. In 1994–95, however, a 1 per cent rise in the East German unemployment rate was associated with a slightly less than 1 per cent (0.7) increase in the percentage of citizens

⁴¹ Note that we were not interested in the conventional interpretation of interactive terms as the cumulative effect of the objective economic variable by itself and together with the interaction term because our hypotheses say nothing about the relationship of the variables over the entire time span. Rather, to confirm our hypotheses, we simply needed to establish that the interaction term was positive and significant.

⁴² The coefficients obtained with the Ordinary Least Squares (OLS) model for the misery index in Model 1b ($\beta = -0.405$; $p < 0.01$) and 1c ($\beta = 2.231$; $p < 0.001$) were very similar to those obtained with GLS (Model 1a: $\beta = 0.225$; $p < 0.07$). The same held true for unemployment and inflation when analysed separately.

for whom unemployment was a top policy priority. Generally speaking, as time passed, East Germans' mention of unemployment as an important problem corresponded with increases in the actual rates of joblessness. These results are thus squarely in line with Hypothesis 2; while East Germans' policy priorities were unrelated to actual economic performance during the initial phase of the transformation, they began to mirror economic performance more closely as time passed.

To ensure the robustness of the results reported in Tables 1–3, we also tested multivariate models of economic perceptions that included controls for significant political factors that may have influenced East Germans' economic perceptions. Specifically, scholars have argued that government actions and political leaders provide voters with economic information, and that people develop economic perceptions by relying on cue-taking (opinion leadership) and information provided by the media.⁴³ To test the proposition that significant political events may influence economic perceptions – specifically the idea that people pay more attention to economic information before an election – we estimated models that included variables measuring the run-ups to the June 1994 European elections and the October 1994 national elections. We found no statistically significant effects for these variables.⁴⁴

DISCUSSION

Our analyses found evidence of a learning process. Specifically, the findings indicated that more East Germans said the economy was performing badly when this was indeed the case only after they had gained experience with the new system. Similarly, they developed a concern with unemployment when joblessness was on the rise only during the latter half of the period investigated here. Thus, as the economic situation improved from late 1993 on, voters noticed. Moreover, they noticed the rise in unemployment in 1993 (translating it into a policy priority) having ignored the larger rise a year earlier.

These results leave an interesting and potentially important political question unanswered: if there indeed was a period of learning, what was the lag between

⁴³ See, e.g., James Alt, 'Ambiguous Intervention: The Role of Government Action in Public Evaluations of the Economy', in Helmut Norpoth, Michael S. Lewis-Beck and Jean-Dominique Lafay, eds, *Economics and Politics: The Calculus of Support* (Ann Arbor: University of Michigan Press, 1991). Alt's study examines government intervention (government policy events) as a link between the objective economy and economic perceptions. However, as Alt (p. 249) himself points out, 'The largest empirical problem with such event studies is that there is no way to demonstrate (other than through consistency of results) that the impact of the designated event in some month really stemmed from that event, and not from something else happening that month, let alone random variation.' See also MacKuen, *More Than News*.

⁴⁴ Note, however, that the simple model tested is consistent with Alt's study: if a general learning process indeed takes place, citizens should be better able to process *any* kind of economic information, including that generated by government actions, after some time has passed. Thus, one can think of political and media variables as mediating factors in such models of economic perceptions.

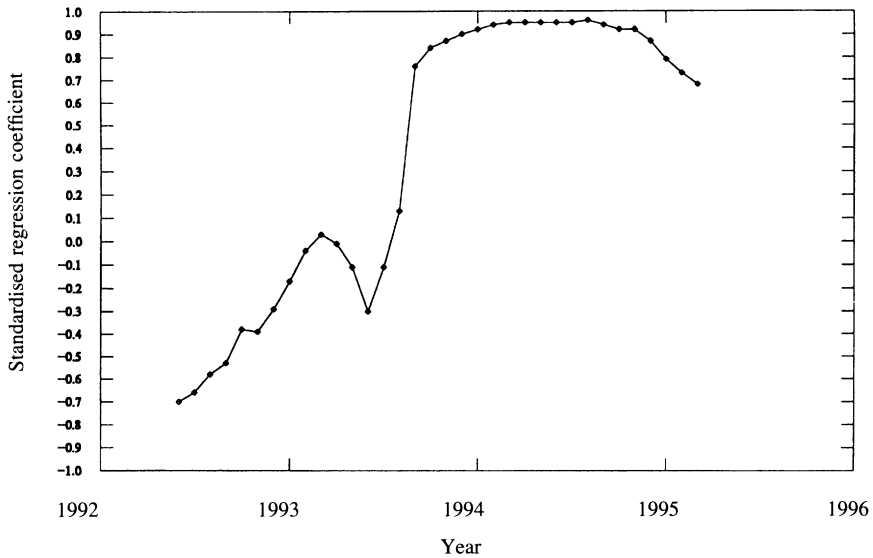


Fig. 2. Moving regressions of economic perceptions on economic conditions

the introduction of the new system and the point at which people acquired experience with it? Put differently, when did the bulk of learning occur? Although we are unable to answer this question at the level of statistical certainty, we are able to offer some indications by exploring the change in the relationship between the objective and subjective economy in greater detail. We can detect such a change by estimating moving regressions 'based on contiguous subsets of the data. These subsets are then moved along the time axis, to give plots of the moving coefficients against time'.⁴⁵ Although such an analysis is largely exploratory, it can help us pinpoint the approximate date of the transition process at which the correlation between objective and subjective economic indicators became positive. Because such a graph shows how the relationship between the two variables varies as a function of time, parameter change over time should appear clearly in these kinds of plots. If the relationship is stable (i.e., time-invariant), the graph shows a flat line. We conducted moving regression analyses of the perception of the economy as 'bad' and the misery index with a window of fifteen months.⁴⁶ Figure 2 graphs the standardized regression coefficients over time.⁴⁷

⁴⁵ Beck, 'Time-Varying Parameter Regression Models', p. 568.

⁴⁶ We also tried smaller and larger windows. The results are not shown here, but they are very similar to those reported here.

⁴⁷ Plots of the unstandardized regression coefficients look very similar to the standardized ones presented here. We show the standardized regression coefficients because they are identical to the Pearson correlation coefficient in a bivariate regression and thus range between -1 and $+1$. We

These results suggest that there was considerable change in the relationship between economic perceptions and the state of the East German economy.⁴⁸ There was indeed a strong upward trend in the relationship, as indicated by the regression analyses presented earlier. To appreciate in more detail how poorly East Germans' economic perceptions and economic trends matched initially, consider the period from the beginning of the time-series until the middle of 1993. Until then, in fact there was a *negative* relationship between actual economic conditions and the perceptions of those conditions. Put differently, for the first two years of re-unified Germany, East Germans thought things were actually not so bad when they were really worse (and vice versa). This changed towards the end of 1993 and the beginning of 1994, when East Germans' perceptions increasingly matched actual economic trends. Thus, consistent with our earlier speculation, the bulk of learning occurred during the first half of the period investigated here and was concluded by the end of 1993. Given that re-unification took place in late 1990, this means that it took East Germans roughly three years to become acquainted with the functioning of the market economy and to translate this experience into collective grievances.

Because this initial study sought to document the existence of the learning phenomenon, several questions regarding the learning process itself remain. In particular, we do not yet know precisely what happens to people's perceptions when systems change – that is, how and what citizens learn at the individual level. It would be important to know, for example, whether East Germans learned from the media that there was a connection between performance and public opinion or whether personal experiences drove the change in perceptions.

Our own analysis of independent political influences on aggregate public opinion described above found little support for the notion that there was an electoral and presumably a concomitant media-driven cycle in the public's attention span – that is, that they paid more attention as elections loomed and when political information was widely available. We would speculate that the learning that took place among East Germans consisted of collecting information about the national economy, instead of focusing on immediate personal well-being, and discovering how to use this information politically. Consistent with research on political behaviour in stable systems that better-informed and more sophisticated citizens are more likely to make use of

(*F*'note continued)

also conducted tests for possible autocorrelation present in the data. It turned out that such concerns were largely unfounded. Of thirty-six moving regressions we estimated, most had Durbin–Watson *d* statistics at conventionally acceptable levels. The average Durbin–Watson *d* statistic for the moving regressions was 1.74. Given the largely exploratory nature of this part of the analysis, we were confident that the results were sufficiently reliable for our purposes. The actual coefficients are shown in Appendix B.

⁴⁸ To check the validity of the findings, we conducted a regression analysis of the parameter estimates as a function of time, time-squared and time-cubed, in order to ascertain whether the fluctuations we show in the graph are statistically significant. We found that time and time-squared were highly significant, while time-cubed was not.

national economic conditions to inform their economic perceptions,⁴⁹ the aggregate results presented above are compatible with the notion that East Germans relied more heavily on national economic conditions as they developed experience with the new environment. Future analyses of which segments of the public and what proportion of it became more informed as time passed should be able to shed light on the precise micro-level processes underlying such attitude development in new systems.

To what extent the findings presented here are generalizable beyond the East German case also will have to be answered by future research. In particular, it will be important to establish whether citizens in systems with different transitions have similar learning curves. Latin American and East European transitions differ, for example, with regard to the novelty of a market economy and the need to learn about it. Moreover, it will be necessary to examine those factors that may mediate the relationship between objective economic conditions and economic perceptions in new systems. These questions probably could most fruitfully be dealt with in the context of panel surveys extended over a significant period of time over the course of the transition process. Unfortunately, there are few systematic data sources currently available to examine such effects.

CONCLUSIONS

The purposes of this study were twofold. First, it sought to develop an understanding of public opinion under conditions of radical system change. Secondly, we set out to examine basic assumptions underlying recent analyses of the economy-behaviour relationship in new political economies. Based on research in experiential learning, we argued that citizens in systems undergoing fundamental transformation processes accumulate expertise that aids them in making sense of their new economic environment. The hypotheses predicted that there was unlikely to be a good match of objective economic conditions and public perceptions of the country's economic conditions during the initial phase of the transition process. However, they also predicted that objective conditions and perceptions would start to track each other more closely as time passed. Thus, after some time had elapsed, neophytes started to behave as conventional theories of political behaviour in stable systems predict.

Our findings have several implications for the study of the relationship between the state of the economy and political support. Before objective economic data are substituted for frequently unavailable perceptual data in models of support, it is critical to consider the political and economic context from which these data are drawn. Such surrogate measures may be problematic, especially in analyses of political behaviour in the new market economies of

⁴⁹ M. Stephen Weatherford, 'Economic Voting and the "Symbolic Politics" Argument: A Reinterpretation and Synthesis', *American Political Science Review*, 77 (1983), 158-74; MacKuen and Mouw, 'Social Class and Economic Judgments'.

Eastern Europe and Latin America. Our conclusions do not, however, undermine the validity of all analyses that have investigated the relationship between government support and objective economic conditions in new democracies, because a number of researchers excluded the first set of competitive elections after the institution of a new system.⁵⁰ In the light of our findings, this appears to be a particularly appropriate research strategy.

The findings also help explain the growing body of results that contradict traditional theories of economic voting and government popularity. Some scholars of the economy-behaviour relationship in advanced industrial societies have pointed to the role of political institutions as a factor that might inhibit straightforward economic effects on government support.⁵¹ They argue that we do not always find a direct link between the two because institutions blur the clarity of responsibility for policy making, thus making it difficult for voters to hold government or some governing parties responsible.⁵² The results presented here suggest that aside from such institutional reasons, there also may be behavioural reasons for a lack of a relationship between economy and support – in this case the transition experience and a lack of systematic understanding about the new economic environment.

Whether and how citizens' economic perceptions are related to how the economy actually performs has direct implications for issues of political legitimacy and stability, in particular in new democracies. If, for example, citizens do not consider the economy to be performing badly during hard economic times, increased political uncertainty may not necessarily result.⁵³ Moreover, the extent to which economic outcomes and citizens' economic perceptions correspond affects citizens' capacity to hold their government accountable.⁵⁴ The findings presented here furnish an additional explanation for why bad economic conditions do not necessarily lead to a deterioration of support for the government or reform policies in new systems, given that citizens' economic perceptions initially may not match actual economic conditions. The results suggest that a positive relationship between growing economic hardship and increasing support for the government may have little to do with citizens' rational acceptance of inferior economic performance, as

⁵⁰ See, e.g., Pacek, 'Macroeconomic Conditions and Electoral Politics in East Central Europe'; Pacek and Radcliff, 'The Political Economy of Competitive Elections in the Developing World'; Karen Remmer, 'The Political Impact of Economic Crises in Latin America in the 1980s', *American Political Science Review*, 85 (1991), 777–800.

⁵¹ Christopher Anderson, *Blaming the Government: Citizens and the Economy in Five European Democracies* (Armonk, NY: M.E. Sharpe, 1995).

⁵² Christopher J. Anderson, 'The Dynamics of Public Support for Coalition Governments', *Comparative Political Studies*, 28 (1995), 350–83; G. Bingham Powell and Guy Whitten, 'A Cross-National Analysis of Economic Voting: Taking Account of the Political Context', *American Journal of Political Science*, 37 (1993), 391–414.

⁵³ See also Susan C. Stokes, 'Introduction: Public Opinion and Market Reforms: The Limits of Economic Voting', *Comparative Political Studies*, 29 (1996), 499–519.

⁵⁴ Holbrook and Garand, 'Homo Eonomus?'

has been claimed by some scholars, and more to do with the novelty of the system and citizens' inexperience with it.

Finally, our analyses also have implications for those engaged in policy making and economic reform, given that governments who seek to manage the macro-economy also assume that there is a reasonably close fit of objective economic reality and economic perceptions. If citizens' perceptions and economic outcomes do not match during the early phase of the transition process, there may be little to gain politically – at least in the short run – from efforts to radically change or improve economic outcomes, especially if this involves a greater probability of losing power as a result. Citizens would not necessarily reward the government on the basis of objective conditions in such a scenario, and policy makers' efforts may be better spent managing public opinion during the initial stages of economic reform. An increase in the congruence of the subjective and objective economy over time implies, however, that support for governments, reforms or even the system as a whole could decline if material conditions do not improve by the time citizens learn to discern good economic performance from bad.

APPENDIX A: SURVEY QUESTIONS

The following items of the Forschungsgruppe Wahlen surveys provided data for this study.

Current Economic Evaluation

'In general, how do you evaluate the current economic situation in eastern Germany?' (good/partly good/partly bad, bad). 'Wie beurteilen Sie ganz allgemein die heutige wirtschaftliche Lage in Ostdeutschland?' (gut, teils gut/teils schlecht, schlecht).

Unemployment Most Important Issue

'In your opinion, what is currently the most important problem in Germany?' (up to two problems could be mentioned) 'Was ist Ihrer Meinung nach gegenwärtig das wichtigste Problem in Deutschland?'

APPENDIX B: MOVING REGRESSION ANALYSES OF ECONOMIC PERCEPTIONS AND ECONOMIC CONDITIONS

Standardized coefficient	Unstandardized coefficient	Adj. R^2	Durbin-Watson's d statistic	p -value	Dates
-0.70	-0.39	0.45	1.84	0.004	11/91-01/93
-0.66	-0.37	0.39	1.71	0.007	12/91-02/93
-0.58	-0.32	0.28	1.82	0.024	01/92-03/93
-0.53	-0.31	0.23	1.58	0.042	02/92-04/93
-0.38	-0.16	0.08	1.44	0.165	03/92-05/93
-0.39	-0.19	0.09	1.49	0.148	04/92-06/93
-0.29	-0.17	0.01	1.58	0.296	05/92-07/93
-0.17	-0.10	0.00	2.19	0.543	06/92-08/93
-0.04	-0.02	0.00	2.58	0.902	07/92-09/93
0.03	0.00	0.00	2.57	0.808	08/92-10/93
-0.01	-0.08	0.00	2.23	0.924	09/92-11/93
-0.11	-0.19	0.00	2.28	0.986	10/92-12/93
-0.30	0.20	0.02	2.80	0.700	11/92-01/94
-0.11	1.93	0.00	1.83	0.273	12/92-02/94
0.13	2.03	0.00	1.60	0.690	01/93-03/94
0.76	2.52	0.54	2.12	0.635	02/93-04/94
0.84	2.53	0.69	2.07	0.001	03/93-05/94
0.87	2.72	0.75	1.91	0.000	04/93-06/94
0.90	2.85	0.80	2.11	0.000	05/93-07/94
0.92	2.99	0.83	1.74	0.000	06/93-08/94
0.94	3.13	0.88	1.39	0.000	07/93-09/94
0.95	3.22	0.90	1.19	0.000	08/93-10/94
0.95	3.22	0.90	1.04	0.000	09/93-11/94
0.95	3.47	0.90	1.06	0.000	10/93-12/94
0.95	3.47	0.90	1.14	0.000	11/93-01/95
0.95	3.49	0.90	1.14	0.000	12/93-02/95
0.96	3.66	0.91	1.41	0.000	01/94-03/95
0.94	3.67	0.88	1.65	0.000	02/94-04/95
0.92	3.66	0.84	1.60	0.000	03/94-05/95
0.92	3.67	0.83	1.54	0.000	04/94-06/95
0.87	3.25	0.73	1.31	0.000	05/94-07/95
0.79	2.57	0.60	1.36	0.000	06/94-08/95
0.73	1.90	0.59	1.61	0.002	07/94-09/95
0.68	1.85	0.50	1.50	0.006	08/94-10/95
0.59	1.41	0.41	1.86	0.021	09/94-11/95
0.53	0.97	0.40	2.28	0.250	10/94-12/95